

ART. I.—*A List of Australian Sea-grasses.*

By C. H. OSTENFELD.

(Copenhagen, Denmark.)

(Communicated by Professor A. J. Ewart.)

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The sea-grasses of a flora are often somewhat neglected, as owing to their peculiar habitat they usually are not collected by plant collectors working on land. On the other hand students of marine Algae also omit to collect them, as not belonging to their special sphere of interest.

A study of the geographical distribution of these interesting spermatophytes has led me to examine the material of sea-grasses preserved in different larger herbaria of the world. My own voyages have added to the knowledge of the occurrence the world over of these plants, and in a preliminary paper (1) I have sketched some of my results, and quite recently I have published a series of maps showing the outlines of their distribution (2).

As to the sea-grasses of Australia a detailed study of the West Australian ones, based upon my own collections in 1914, has augmented their number in that part of Australia (3), and by the examination of the National Herbaria of New South Wales (Sydney), and Victoria (Melbourne), and some recent collections from the Eastern States, I discovered several further interesting additions to our knowledge of the distribution of the sea-grass Flora of Australia.

I think it, therefore, worth while to give a short enumeration of the species of sea-grasses of Australia, and the localities of the specimens seen by me.

I am not, at present, able to give a definite opinion as regard the specific value of the *Zosteras* of Australia, and prefer, preliminarily, to refer them all to two species—*Z. Mülleri* Irmisch, and *Z. capricorni* Aschers.

I do not quote the records given in the floras (Bentham, Flora Austr., vii.; F. v. Müller, Sec. Census Austr. Pl.), but mention only the specimens actually seen.

As regard to the synonymy, I refer to P. Ascherson in Das Pflanzenreich, iv., 2, 1907.

Fam. POTAMOGETONACEAE.

*Cymodocea*.

1. *C. angustata* Ostf.—Western Australia: Carnarvon (Herb. Copenh.).

2. *C. antarctica* (Labill.) Endl.—R. Brown, Iter Austr. No. 5814 (Brit. Mus.). Victoria: south coast, Tasmania, South Australia, and Western Australia, as far north as Geraldton.
3. *C. ciliata* (Forsk.) Ehbgr.—(Queensland: near Port Denison (Herb. Melb.), Queensland shores (Kew).
4. *C. isoctifolia* Aschers.—Queensland: Edgecombe Bay (Kew); Port Denison, Fitzalan (Herb. Melb.).  
Western Australia: Champion Bay (Herb. Melb.; Lund Herb.); Geraldton and Carnarvon (Herb. Copenh.).
5. *C. rotundata* ? (Ehrbg., Hempr.), Aschers and Schweinf.—(Queensland: Port Denison, Fitzalan (Herb. Melb.). The identification of this fragmentary material is not quite certain. Reported from NW. Australia, floating near the Montebello Islands (Ascherson) ?; perhaps *C. angustata*.
6. *C. serrulata* (R.Br.), Aschers. and Magn.—R. Brown, Iter Austr. No. 5813 (Brit. Mus.).  
Queensland: Port Denison (Kew).

#### Diplanthera.

7. *D. uninervis* (Forsk.) Aschers.—Queensland: Port Denison (Fitzalan) and Rockingham Bay, 1883, F. v. Müller (Herb. Melb., Herb. Copenh.); Pialba, 1921, Sab. Helms (Herb. Copenh.).

#### Posidonia.

8. *P. australis* Hook fil.—R. Brown, Iter Austr. Nos. 5812 and 5817 (Brit. Mus.). South coast of the continent, many places. Tasmania, Western Australia, as far north as Carnarvon (Herb. Copenh.).

#### Zostera.

9. *Z. capricorni* Aschers.—Queensland: Cape York (Herb. Kew).  
New South Wales: Sydney Harbour, 1915, Th. Mortensen (Herb. Copenh.); Long Reef, north of Port Jackson, 1914, Th. Mortensen (Herb. Copenh.); Botany Bay, Sans Souci, 1915 and 1917, Boorman (Herb. Copenh.); Harwood Island, Clarence River, 1922, Sab. Helms (Herb. Copenh.).
10. *Z. Mülleri* Irmisch.—Victoria: Austr. Felix, F. v. Müller 1852 (Herb. Melb.); Port Phillip Heads (Brit. Mus.; Herb. Copenh.); Point Lonsdale, Josephine Tilden (U.S. Nat. Herb.).  
South Australia: Mouth of Hindmarsh River, Victor Harbour, 1928, J. B. Cleland (Herb. Copenh.); Ade-

laide, Victor Harbour, 1914, W. Herdman (Herb. Copenh.); Port Pirie, 1914, Gunnar Andersson (Herb. Copenh.).

Tasmania: *sine loco*, J. R. Gunn (Herb. Sydney; Herb. Copenh.); Tasman Penins., Port Arthur, 1914, L. S. Gibbs (Herb. Copenh.); D'Entrecasteaux Channel, Port Esperance and South Port, 1915, L. S. Gibbs (Herb. Copenh.).

## Fam. HYDROCHARITACEAE.

### Halophila.

11. *H. decipiens* Ostf.—New South Wales: Sydney Harbour, Brazier and Ramsay, 1884 (Herb. Sydney).

Queensland: Pialba, 1921, Sab. Helms (Herb. Copenh.).

12. *H. ovalis* (R.Br.) Hook. fil.—R. Brown, Iter Austr., No. 5816 (Brit. Mus.; Kew).

Queensland: Pialba, 1921, Sab. Helms (Herb. Copenh.); Port Denison (Upsala Herb.); Cape York (Brit. Mus., Kew).

New South Wales: Port Jackson (Herb. Sydney).

Lord Howe Island: MacDonald, 1855 (British Mus.; Kew Herb.).

Victoria: Western Port Bay (Brit. Mus.; Hamburg Herb.); Sorrento (Lund Herb.); Port Phillip (Berlin Herb.; Kew; Herb. Melb.).

Tasmania: Georgetown, J. R. Gunn (Kew Herb.; Herb. Bremen; Herb. Copenh.).

West Australia: Rottnest Island and Freshwater Bay, Swan River (Brit. Mus.; Kew); Yallingup and Geraldton, 1914 (Herb. Copenh.).

13. *H. spinulosa* (R.Br.) Asehers.—R. Brown, Iter Austr., No. 5815 (Brit. Mus.).

Queensland: Port Denison (Herb. Melb.; Herb. Calcutta; Herb. Acad. Leningrad); Pialba, 1921, Sab. Helms (Herb. Copenh.); Cape York (Kew); Albany Is. in Moreton Bay (Kew); Brisbane (Kew).

### Thalassia.

14. *T. Hemprichii* (Ehrbg.) Asehers.—Queensland: Port Denison, Fitzalan (Herb. Melb.); Murray Is., Torres Strait, C. Hedley, 1907 (Herb. Sydney, sub. nom. *Cym. ciliata*, efr. J. H. Maiden and E. Betehe, *Proc. Linn. Soc. N.S.W.*, December, 1909).

### Enhalus.

15. *E. acoroides* (L. fil.) Steud.—Queensland: Thursday Is., J. Douglas, 1886 (Herb. Melb.); Cape York, Challenger Exp., 1874 (Kew).

As stated above, the list contains only the localities from which I have seen specimens. No doubt the distribution of the different species along the coasts of Australia will be extended by future investigations, and I shall with pleasure identify any specimen of sea-grass sent to me, and hope that collectors will help me by sending me unnamed specimens. It is possible to name the species also from sterile specimens, but of course it is more interesting to get some with flowers and fruits. Of some of the species I have only seen sterile specimens from Australia, e.g., *Halophila ovalis*, *Cymodocea serrulata* and *C. ciliata*.

#### References.

1. C. H. OSTENFELD. On the Geographical Distribution of the Sea-grasses. *Proc. Roy. Soc. Victoria*, n.s., xxvii. (2), 1915.
2. ———. Meeresgräser, in Hannig u. H. Winkler, *Pflanzenareale*, Bd. 1, 1926-27.
3. ———. Contributions to West Australian Botany. I. The Seagrasses of West Australia. *Dansk Botanisk Arkiv*, 1916, Bd. 2, Nr. 6, Copenhagen.